IN THE SPECIFICATION

Please replace the second full paragraph on page 9 of the specification with the following paragraph:

> Alternatively, the first and/or second thermal sensors 38, 40 may be positioned such that one or more of the sidewalls 90, 92 are within the field of views 56, 58 of the sensors 38, 40. Such an exemplary embodiment is shown in Fig. 10 in which the temperature of the second sidewall ~~93~~ 92, here the inboard sidewall, is measured.

Please replace the first full paragraph on page 14 of the specification with the following paragraph:

> The present invention may be configured in order to reduce or eliminate false alarms detected by the system. For instance, Fig. 4 shows one such configuration where the signal processing device 50 is configured to reduce the chances of a false detection. As can be see in Fig. 4, the tire 10 is rotated such that the first location 42 is sensed by the first thermal sensor 38, and subsequently the second location 44 is likewise sensed by sensor 38. A graph of time or location versus temperature is shown. The horizontal axis of the graph in Fig. 4 shows temperature readings at consecutive locations on the outer surface 60 of the tire 10. As can be seen, these readings are repetitive due to the fact that the tire 10 will rotate and produce data representative of the temperature at various locations on the tire 10 over a course of time. In this exemplary embodiment of the present invention, the majority of the outer surface 60 of the tire 10 is measured to be at a temperature of 50 degrees Celsius. This is true every time the second location 44 of the tire 10 is measured by the first thermal sensor 38. However, the first location 42 is experiencing a heat increase due to tread belt separation. This heat increase is shown as a temperature spike 70 in the graph. The temperature difference ~~60~~ 68 between the first location 42 and the second location 44 is measured as a five degree Celsius temperature difference 68. These temperature spikes 70 occur every time the first thermal sensor 38 measures the first location 42. In certain exemplary embodiments, the first and second thermal sensors 38 and 40 may be configured to measure over a fifty millisecond time period a five degree Celsius temperature difference between the locations 42 and 44 and between locations 46 and 48. Other exemplary embodiments, for instance those shown in Figs. 7 and 8, may also measure over a fifty millisecond time period.

Please replace the second full paragraph on page 15 of the specification with the following paragraph:

The readings from the later time 74 also show the temperature spike 70 at the first location 42. However, the temperature spike 70 is longer at ~~these locations as~~ this location than that previously recorded from the readings from the earlier time 72. This increase in time or location indicates that the hot spot at the first location 42 is growing circumferentially around the outer surface 60 of the tire 10. In essence, a larger hot spot is being measured. This condition is indicative of tread belt separation and may be sensed by the signal processing device 50 in order to both detect tread belt separation and eliminate the potential of a false alarm. In one exemplary embodiment of the present invention, the time or location difference is an increase of 25%. The temperature difference 68 measured at both the earlier and later times 72 and 74 is greater than or equal to approximately five degrees Celsius. At this point, the signal processing device 50 may look for an additional ~~criteria~~ criterion in order to determine whether tread belt separation is occurring, or whether a false alarm is being detected. This further ~~criteria~~ criterion may be an increase in the size of the hot spot on the outer surface 60 of the tire 10.

Please replace the last paragraph on page 15 of the specification that extends onto page 16 of the specification with the following paragraph:

A further configuration of the present invention includes another mechanism for detecting tread belt separation while eliminating the potential of false alarms. Fig. 8 and 8A show a configuration where again the tire 10 is measured at the first and second locations 42 and 44. Here, the temperature difference 68 between the first and second locations 42 and 44 is measured at an earlier time 72. It is not necessary that the temperature difference 68 be five degrees Celsius. Temperature readings on the outside surface 60 of the tire 10 are again measured at a later time 74. Here, the temperature difference is recorded as being a two degree Celsius increase ~~verses~~ versus the temperature difference 68 recorded at the earlier time 72. Readings from an even later time 76 are recorded, and show the temperature spike 70 having an increased temperature difference 68 of four degrees Celsius from the previous measurements at time 74. As can be seen, the temperature measurements at times 72, 74, and 76 show an increasing temperature difference 68 of the temperature spike 70 during a progression of time. This increase in the temperature difference 68 over a predetermined amount of time may be used to instruct the signal processing device 50 to produce the processing device output signal 52 in order to alert the driver of the vehicle 20 that tread belt separation or another undesirable condition is occurring. In one exemplary embodiment of the present invention, a five degree or greater Celsius temperature difference may be measured over a period of two months in order to generate the processing device output signal 52 in order to warn the driver. However, various temperature differences 68 and amounts of time may be used in other exemplary embodiments of the present invention.

Please replace the first full paragraph on page 16 of the specification with the following paragraph:

> Comparing one tire 10 to another tire 10 of the vehicle 20 can also reduce false alarms. For example, if the driver brakes hard, the separate tires 10 will have similar localized hot spots. If the thermal pattern between the two tires 10 is similar, then driving conditions are probably the cause. This situation suggests a false alarm was indicated, and probably not tread belt ~~seperation~~ separation.

Please replace the last paragraph on page 18 of the specification that extends onto page 19 of the specification with the following paragraph:

> Still further exemplary embodiments of the present invention exist where, for instance, the temperatures on a pair of tires 10 are measured and compared. In this regard, a pair of sensors may be placed on the first tire 10, and a pair of sensors may be placed on the second tire 10. In this regard, should the absolute value of the difference between the temperature sensed by one sensor on the first tire 10 and the temperature sensed by a sensor on the second tire 10 be greater than some predetermined value, the processing device output signal 52 may be generated. Likewise, the absolute value of the temperature difference between the temperature sensed by the second sensor on the first and second tires 10 may be calculated, and if this absolute ~~valve~~ value is larger than some predetermined value, the processing device output signal 52 may be generated. In one exemplary embodiment of the present invention, the predetermined values of the temperature differences as previously discussed may be 5 degree Celsius. Additionally, other configurations and ways of generating the processing device output signal 52 upon comparison of temperatures at one or more locations on one or more tires is possible in accordance with various exemplary embodiments of the present invention.